

BRITVA, Ya.D.; ZHUKOV, N.F.; ZHURBA, V.K.; PECHERSKIY, Ye.A.

Rate of compression in die casting machines. Lit. proizv.
no.1:10-11 Ja '63. (MIRA 16:3)
(Die casting)

S/128/63/000/001/003/008
A004/A127

AUTHORS: Britva, Ya.D., Zhukov, N.P., Zhurba, V.K., Pecherskiy, Ye.A.

TITLE: On the problem of pressing rate in die-casting machines

PERIODICAL: Liteynoye proizvodstvo, no. 1, 1963, 10 - 11

TEXT: To vary the pressing rate during die-casting, it is necessary to change over from the differential feed of the hydraulic fluid to the cylinder to the non-differential feed. An accurate determination of the change-over moment requires a device which measures the rate of pressing. A prototype model of a device determining the average speed of the plunger over a distance of at least 10 mm has been developed by the Novosibirsk "Siblitmash" Plant. The time intervals in which the plunger travels the necessary section of stroke are determined by two contact pickups which are mounted on the path of travel of the press'plunger. The authors present a brief description of operation and a block diagram of the device. There are 2 figures. ✓

Card 1/1

L 12248-63
ESD-3/APGC

EWI(d)/ICC(w)/BDI ASD/
Pg-4/Pk-4/Pc-4/Pq-4 GB/IJP(C)

S/271/63/000/004/022/045

AUTHOR: Pecherskiy, Yu. N. and Utkin, A. A.

74

TITLE: Programming an analysis of relay circuits

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya
tekhnika, no. 4, 1963, 59, abstract 4A367 (Uch. zap. Tomskiy un-t;
1962, no. 41, 180-193)

TEXT: The task involved in analysis of a relay circuit is to determine the system of functions of the link of output and input logical variables (matrix of reactions) and to find the matrices of the transitions. It is noted that the process of analysis of relay circuits may be automated. As distinct from familiar methods based upon the construction of specialized devices, the method in question is based upon the use of universal digital computers. Here, the analysis of a relay circuit amounts to an analysis of N logical circuits, where N is the number of conditions. If we fix the values of the proper variables, then the relay circuit may be regarded as logical. By means of successive selections of all conditions of feedbacks, all unknown functions are determined. With the help of the given program, the authors analyze a number of logical and relay circuits. Here, the time of analysis of a logical circuit of 13 elements amounts to 8 minutes; of a

Card 1/2

L 12248-63

S/271/63/000/004/022/045

Programming an analysis

circuit of 19 elements, 11 minutes. To analyze a relay circuit of four elements with two feedback loops requires 20 minutes. The authors point out the advantages and weaknesses of the use of specialized and universal computers. There are four illustrations and a bibliography of 7 items. A. S.

[Abstracter's note: Complete translation]

bm/al
Card 2/2

RUMANIA / Pharmacology and Toxicology. Tranquilizers.

V-2

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 80498

Author : Chivu, V.; Pechot, P.; Moisanu, Melania

Inst : Not given

Title : Influence of Chlorpormazine and Hexamethonium on Interoceptors

Orig Pub : Fiziol. norm. si patol., 1958, 5, No 1, 29-37

Abstract : The effect of hexamethonium and chlorpormazine on the interoceptors was studied on the intestines, kidneys and spleen of dogs perfused with a Tyrode solution, with intact nerve connections. The vasopressor and respiratory reflexes caused by the introduction of 2 ml of a 2% KCl solution were used as a test. It is shown that hexamethonium does not have any influence on the interoceptors, but chlorpormazine stops their excitability.

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APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001239810016-0"

CZECHOSLOVAKIA / Chemical Technology. Fermentation Ind- H
ustry.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 75457.

Author : Pechev, Pavlov.

Inst : Not given.

Title : Development of Viticulture in Bulgaria.

Orig Pub: Vinarstvi, 1958, 51, No 6, 88-91.

Abstract: Significant progress was achieved in Bulgaria in the last years in increasing the varieties and in improving the quality of wines. Side by side with the red and white dry wines of superior quality, a large quantity of excellent dessert wines, brandy alcohol, sparkling wines, etc., are also produced.

Card 1/2

PECHEV

BULGARIA/Microbiology - Industrial Microbiology.

F-3

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19456
 Author : Raduchev, Pechev, Stefanova
 Inst : -
 Title : Experiments in Constructing Most Suitable Plants for
 Production of Bulgarian Champagne Wine.
 Orig Pub : Lozarstvo i Vinarstvo, 1956, 5, No 6, 366-374
 Abstract : No abstract.

Card 1/1

PECHEV, I - st. asistent
 APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001239810016-0"

Roentgenological picture of radiation pneumosclerosis. Sovrem. med.,
 Sofia 8 no.11:42-50 1957.

1. Iz Instituta po rentgenologija i radiologija pri VMI (Zav. katedrata:
 prof. d-r A. Nikolaev).

(LUNGS, effect of radiations,
 radiother. causing pneumosclerosis, x-ray picture (Bul))
 (ROENTGEN RAYS, inj. eff.
 pneumosclerosis in ther. of cancer, x-ray picture (Bul))

PECHEV, A
BULGARIA / Chemical Technology, Chemical Products and Their
Application. Fermentation Industry.

H-27

Abs Jour : Ref Zaur - Khimiya, No 5, 1959, No. 17256

Author : Pechov, K.; Bakrdzhiyev, N.

Inst : Not given

Title : Classification of Wines by Brands in the NRB

Orig Pub : Lozatsvo i vinarstvo, 1958, 7, No 3, 44-49

Abstract : Establishment of the new wine brand is described. This wine is derived from Gymza vine variety originating in the rayon of Novoye Selo. -- G. Valuyko

Card 1/1

H-107

BULGARIA / Chemical Technology, Chemical Products and Their
Application. Fermentation Industry.

H-27

Abs Jour : Ref Zaur - Khimiya, No 5, 1959, No. 17254

Author : Pechov, K.

Inst : Not given

Title : "Iskra" - Bulgarian Red Champagne Wine

Orig Pub : Lozatsvo i vinarstvo, 1958, 7, No 4, 47-50

Abstract : The red Bulgarian champagne "Iskra" is prepared in accordance with the classical bottled method from Gymza and Mavrud grape varieties. It is of high quality (8.5 - 9.6 degrees). From the above varieties it is also possible to produce red Bulgarian champagne of good quality by employing acatafocic* method. -- G. Valuyko

* Not sure of this equivalent

Card 1/1

110

PECHEV K.

Bulgaria/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63551

Author: Pechev, K.

Institution: None

Title: Improvement of the Quality of Vodka by Purification with Potassium Ferrocyanide

Original

Periodical: Podobreniye na rakite posredstvom bystrene s kaliyev ferotsianid. Lozarstvo i vinarstvo, 1954, 3, No 2, 126-127; Bulgarian

Abstract: To remove the salts of heavy metals which impart to vodka an unpleasant metallic taste and opalescence it is proposed to treat vodka with potassium ferrocyanide (I). This is done by first adding tannin at a rate of 2-4 g per 100 l, then I, and thereafter gelatin, 2-4 g per 100 l. After 6-8 days the vodka is separated from the precipitate and filtered. Standing in contact with precipitate must not exceed 2 weeks. The treated vodka is analyzed for absence of unreacted I.

Card 1/1

PECHEV, M.; KRISTOV, B.

At the "Balkanton" Gramophone Record Plant. Radio i televizija
13 no. 5:131-133 '64

PECHEVSKI, M.

"Educational excursions and travels to study geography."

P. 203 (Priroda I Znanie, Vol. 11, nos. 1-3, Jan.-Mar. 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 7, July 1958

PECHEVSKI, M

Bulgaria - nashata rodina (Bulgaria, our Country) by V. Volev and others;
a book review. p. 24.
GEOGRAFIJA, Sofiya, Vol. 6, no. 1, 1956

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956,
Uncl.

PECHEVSKI, M.

Ceylon, pearl of the East. p.19. GEOGRAFIJA. (Bulgarsko geografsko
druzhestvo) Sofiya. Vol. 5, No. 5, 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress
Vol. 4, No. 12, December 1955

PECHEVSKI, M.

Educational reading on geography. p.24. GEOGRAFIJA. (Bulgarsko
geografsko druzhestvo) Sofiya. Vol. 5, No. 5, 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress
Vol. 2, No. 12, December 1955

FURMAN, I.Ya.; PECHENYKIN, V.A.

Using mathematical statistics to determine disproportion in gas
consumption. Gaz. prom. 9 no.5:30-33 '64. (MIRA 1'16)

S/076/60/034/010/007/022
B015/B064

AUTHORS: Panchenkov, G. M., Kazanskaya, A. S., and Pecheykin, V. A.

TITLE: Exchange Capacity of Aluminosilicate Cracking Catalysts

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 10,
pp. 2217 - 2222

TEXT: Aluminosilicate catalysts used for the cracking of hydrocarbons have an acid character. The type of acid and the role of the various acids upon the catalytic process have hitherto not been clarified. V. A. Chernov (Ref. 7) showed that in montmorillonite alumina, besides proton exchange, also an exchange of aluminum ions is possible, and that alumina can be regarded as an aluminum salt of aluminosilicic acids. The present paper deals with the ion exchange of an aluminosilicate catalyst in aqueous salt solutions of alkali metals. A commercial catalyst (14.01% Al_2O_3 , 84.66% SiO_2 , 0.36% Na_2O , 0.13% Fe_2O_3 , 0.60% CaO) with a specific surface of $305 \text{ m}^2/\text{g}$ was used, and annealed at 550°C for two hours before the experiment. The experiments were

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Exchange Capacity of Aluminosilicate
Cracking CatalystsS/076/60/034/010/007/022
B015/B064

conducted with NaCl, LiCl, and sodium acetate solutions of different concentrations. The acidity caused by the exchange of the alkali metal for the proton in the catalyst was determined by a method of V. A. Chernov (Ref. 8). The ion exchange was determined by potentiometric titration of the solutions (after two days' vigorous shaking with the catalyst). The results obtained show that the amount of the exchanged protons is much smaller than that of the aluminum ions. After the exchange reaction, aluminum was detected in the NaCl and LiCl solutions, while this was not the case with the sodium acetate solution. This is due to the fact that aluminum acetate hydrolyzes immediately on the surface of the catalyst where it is deposited as aluminum hydroxide, an equivalent amount of acetic acid being dissolved. Experiment and calculation show that the maximum amount of the hydrogen and aluminum ions of the catalyst exchanged by alkali metal ions is practically independent of the type of the latter (i.e., the values for Li and Na ions are practically equal). For the above reason, the amount of acetic acid forming from the sodium acetate solution during the exchange of the ions of the catalyst for Na ions corresponds to the sum of the equivalents of the exchanged hydrogen and aluminum ions of the catalyst. There are

Card 2/3

L 14875-66

ACC NR: AP6008352

SOURCE CODE: HU/0036/65/072/005/0305/0319

AUTHOR: Pecsi, Marton—Pechi, M. (Corresponding member MTA, Director) 23

ORG: Research Group for Geographical Sciences, Hungarian Academy of Sciences B
(Magyar Tudományos Akadémia Földrajztudományi Kutatocsoportja)

TITLE: Current problems of the geographical sciences 12

SOURCE: Magyar tudomány, v. 72, no. 5, 1965, 305-319

TOPIC TAGS: geography, geomorphology, cartography, economic geography, demography, agriculture

ABSTRACT: A general survey was made of the subjects covered by the designation "geographical sciences", geographical research in Hungary, geographical research projects of a general nature, geomorphological cartography, research on the spatial distribution of the facilities of the Hungarian economy, maps for agricultural investigations and for soil utilization, industrial geography, demographical geography, the National Hungarian Atlas, relations between Hungarian geographical research organizations and foreign organizations, and matters of administration. [JPRS] 55

SUB CODE: 08 / SUM DATE: none / ORIG REF: 003 / SOV REF: 001

Card 1/1 20

FECHI, Marton [pécsi, Marton]; SARFALVI, Bela[Sarfalvi, Bela];
KAPELUSH, S.I., red.; ZABIROV, B.Sh., red.; SHAPOVALOVA, N.S.,
mladshiy red.; KISELEVA, Z.A., red. kart.; BURLAKA, E.P.,
tekhn. red.

[Hungary; studies on physical and economic geography]Vengriia;
ocherki fizicheskoi i ekonomicheskoi geografii. Moskva, Geog-
rafgiz, 1962. 315 p. (MIRA 15:9)
(Hungary---Geography)

PECHI, M.

MARKOSH, D.; PECHI, M.; SABO, L.

[The geography of Hungary; an abridged translation from the Hungarian] Geografia Vengrii; sokr. per. s vengerskogo. Moskva, (MLRA 8:2D)
Izd. inostr. lit., 1954. 246 p.

PECHIGARGOV, I.K., insh.

Dosimeter for chlorinating water. Suggested by I.K.Pechi-
gargov. Rats.i isobr.predl.v stroi. no.11:93-95 '59.
(MIRA 13:3)

1. Po materialam Instituta ratsionalizatsii, Bolgariya.
(Bulgaria--Water--Chlorination)

PECHIGAROV, K.

Water hammer in water pipes; means of protection and prevention. p. 11.

Vol. 2, no. 5, 1955
STROITELSTVO
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

PECHIGAROV, K.

Air escape valve; discharge and suction of air by water pipes. p. 20.

Vol. 2, no. 6, 1955
STROITELSTVO
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

MOLLOV, N.; HAIMOVA, M. [Khaimova, M.]; TSCHERNEVA, P. [Cherneva, P.];
PECIGARGOVA, N. [Pechigargova, N.]; OGNJANOV, I. [Ognianov, I.];
PANOV, P.

Alkaloids of *Accnium ranunculaefolium*. Doklady BAN 17 no.3:
251-254 '64.

1. Vorgelegt von B.Kurtev, korr. Mitglied d. Akademie.

L 6873-65 EPA(s)-2/EWT(m)/K/EPF(c)/EPF(n)-2/LPR/EPA(w)-2/EMP(q)/EWP(b)/
EWA(h) Pab-24/Pr-4/Pis-4/Pt-10/Peb/Pu-4 IJP(c)/ASD(m)-3 J3/WW/WH
ACCESSION NR: AR4041675 8/0081/64/000/007/PO13/PO13

106

SOURCE: Ref. zh. Khimiya, Abs. 7P83

AUTHOR: Tesner, P. A.; Peshik, Y. I.

TITLE: Volume packing of porous graphite materials with carbon.

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleeva, vy*p.
42, 1963, 35-38

TOPIC TAGS: graphite, graphite material, carbon, volume packing

TRANSLATION: To guarantee volume packing of porous graphite materials at a temperature of 950° there was created a forced flow of CH₄ through graphite materials. As a result of more uniform shutting of pores during treatment there was observed an increase of absolute weight gain compared to treatment in conditions of natural diffusion. Research of microstructure of graphite materials showed that in forced flow precipitation of C occurs throughout the sample.

SUB CODE: MT, GC

ENCL: 00

Card 1/1

L 23020-55 EPF(c)/EPF(n)-2/EPR/ENG(j)/EPA(s)-2/EPA(w)-2/EWA(h)/EWT(m)/EWP(b)/
 ACCESSION NR: APL049567 EWP(e) Pr-4/Ps-4/Pt-10/Pu-4/ S/0064/64/000/011/0000/0013
 Feb WH/WH

AUTHORS: Pechik, V. K.; Makarov, K. I.; Tesmur, P. A.

TITLE: Sealing of porous graphitic carbon materials with pyrolytic carbon during the process of their thermal conditioning in an atmosphere of natural gas

SOURCE: Khimicheskaya promyshlennost', no. 11, 1964, 8-13

TOPIC TAGS: graphite, pyrolytic carbon, carbon/ARV graphite, TR 60/500 furnace, EPV2 11 potentiometer, Pt 50 graphite

ABSTRACT: Sealing of porous graphitic carbon materials with pyrolytic carbon during heat treatment in natural gas was experimentally investigated. Synthetic carbon (type ARV, pores 0.6-9.0 micron, 25% porous, apparent density 1.5 g/cm³, specific area 0.58 m²/g) was placed in a TR-60/500 electric furnace (controlled by an EPV2-11 potentiometer ± 30) and was subjected to either forced filtration or external flow of natural gas (81.2% CH₄, 4.0% C₂H₆, 1.4% C₃H₈, 0.53% C₄H₁₀, 0.17% CO₂, 12.7% N₂). Forced filtration with natural gas or a gas mixture (15 and 30% H₂ by volume) was performed on cylinders (90 mm long, 20 mm outside diameter, 7 mm wall thickness) at 900, 950 and 1000C located as shown in Fig. 1a on the Enclosures.
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L 23020-65

ACCESSION NR: AP4049567

3

External gas flow (165 ml/min) was applied to 20-mm diameter, 90-mm long cylinders located in different diameter tubes as shown in Figs. 1b and 1c on the Enclosures. The results of the experiments are shown in Figs. 2, 3, and 4 on the Enclosures. It was found that the properties of the pyrolytic carbon and the sealing effectiveness depended strongly on the free space above the surface of the specimens (see Fig. 3 on Enclosures); at a minimum free space above the specimen, the carbon formation at the surface was on the order of $10^{-5} - 10^{-6}$ g/cm² min; materials with apparent densities of less than 1.0 g/cm³ could be sealed significantly by this method; increasing the carbon formation rate decreased the properties of the carbon covering. The macrokinetic rate constant for the thermal conversion of methane to carbon on a porous graphite surface for temperatures of 900-1000C was found to be

$$K_c = 2.5 \cdot 10^{10} \exp(-78000/RT),$$

Orig. art. has: 7 figures, 4 tables, and 2 formulas.

ASSOCIATION: MKHTI in. D. I. Mendeleeva; VNIIGaz

SUBMITTED: CO

SUB CODE: MT

NO REF SOV: 002

ENCL: 04

OTHER: 003

Card 2/6

TERZIEV, G.; BLIZNAKOV, Khr.; TCHOMAKOV, M. [Chomakov, M.]; PETCHILKOV, I.
[Pechilkov, I.]; BAKOV, P.; PEEV, Khr.; DIMITROVA, N.; POPOVA, M.

Fatal parathion poisoning. Folia med. (Plovdiv) 6 no.4:274-279
'64

1. Institut de Hautes Etudes Medicales "I.P.Pavlov" de Plovdiv,
Bulgarie; Chaire de Medecine Legale (Directeur interimaire:
prof. P. Mironov).

BULGARIA

Poisonings

PECHILKOV, I., DIMITROVA, N.

"A Case of Lethal Poisoning with Tofranil"

Sofia, Suvremenna Meditsina, Vol 17, No 12, 1966, p 1026

Abstract: Descriptions of acute poisoning with tofranil are seldom encountered in the world literature. The authors observed a case of lethal poisoning after a child 1 yr 4 mos old had swallowed approximately 35 tablets (875 mg) of this drug. The clinical symptoms comprised trembling of the face musculature, eyelids, and lips, loss of consciousness changing to coma, uninterrupted clonicotonic spasms, inhibition of the activity of the respiratory center (apnea), lowered body temperature, tachycardia, and cyanosis of the lips. The reaction of the pupils to light was retained. The child died seven hours after swallowing the drug.

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SALEY, N.; PECHILKOV, I.
APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001239810016-0"

A case of hermaphroditism. Suvrem med., Sofia no.11:126-132 '60.
(HERMAPHRODITISM case reports)

KALEV, N.; PECHILKOV, Iv.

A case of hermaphroditism. *Suvrem med.*, Sofia no.11:126-132 '60.

1. From the Chair of Surgical Propedeutics at the Superior Medical Institute "I.P.Pavlov" in Plovdiv (Chairman Ass. prof. IU.Toshev) and the Chair of Legal Medicine at the Superior Medical Institute "I.P.Pavlov" in Plovdiv (Chairman Ass. prof. T.TSokov)
(HERMAPHRODITISM case reports)

PEČINAR, M. M.

Meteorological Abst.
Vol. 4, No. 5
May 1953
Aqueous Vapor and
Hydrometers

15-179
*Pečinar, Miladin M., Opšti katastar voda za reke Dunav i Tisu. [General survey of Danube and Tisza rivers.] *Yugosl. na. Hidrometeorološka Služba. Hidrometeorološki Glasnik*, 3:86-91, 1950. 6 figs. In Serbian. DWB--In 1949 the Hydrometeorological Service started a general survey of the hydrologic resources in Yugoslavia. This is a report on the presented outline, the first in a series of similar investigations. The graphs show the increase in the water supply from the tributaries of the Danube (Drava, Tisza and Morava) month and extreme variations of the runoff on the Danube near Pancevo for the period 1921-1949 and the variations of the river level. The author states that the Danube gets its main water supply from the territory of Yugoslavia since the mean runoff increases over the territory from 2200 m³/sec up to 6090 m³/sec, i.e., in the relation of 1:2.75. Subject Headings: 1. Water supply survey 2. Water level variations 3. Runoff 4. Danube River 5. Tisza River 6. Yugoslavia. - N T Z.

PECHNIKIN, A., kapitan tekhn. sluzhby

Fuel supply for units operating in a forested mountain locality.
Tyl. i snab. Sov. Vooc. Sil 21 no. 4. 37 40 A. 1961.
(MIRA 14.7)

(Russia--Armies--Fuel)
(Mountain warfare)

Pechinov, D.

SCIENCE

Periodical: KHIDROLOGIIA I METEOROLOGIIA. "o. 4, 1958

PECHINOV, D. Concerning the article "Hard Deposits from the Flow of the
Siutliika River at the Dzhebel Railroad Stop." p. 86.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 2
February 1959, Unclass.

PECHINOV, D.

An approximate formula for determining the coefficient of variation of statistic series.
p. 38.

(Khidrologhia I Meteorologiia, No. 6, 1956, Bulgaria)

SO: Monthly List of East European Acquisitions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

PECHINOV, D.

Alluvium from the small catchment areas, and clogging of small
reservoirs. Trud Inst khidro meteor 14:141-161 '63.

PECHENOV, D.

"On the methods for measuring and calculating the floating drift."

KLIMATOLOGIJA I METEOROLOGIJA., Sofia, Bulgaria., No. 6, 1958

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), IC, Vol. 8, No. 7, July 1957, Unclass

PECHINOV, D.

"Concerning the influence of the inequality in the distribution of the water flow on the quantity of the deposits."

KHIDROLOGIJA I METEOROLOGIJA., Sofia, Bulgaria., No. 2, 1959

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

PECHINOV, Dim.

Duration curves of the water discharge of Bulgarian rivers,
Khidro i meteorolog 13 no. 2:35-44 '64.

PECHINOV, Dim.

Floating silt in the Danube River. Khidro i meteorolog no.2:23-35
'61. (EIAI 10:9)

(Rivers) (Silts)

PECHINOV, Dimitur

Organic substances in the floating alluvium in the rivers
of Bulgaria. Khidro i meteorolog no.6:31-39 '61.

PECHINOV, Dim.

Factors and conditions of floating deposits in the rivers of the
White Sea Basin in Bulgaria. Trud Inst khidro meteor no.12:
45-75 '62.

FECHINOV, Dim., inzh.

River hydrology in the basin of the Yucha River. Trud Inst
khidro meteor no.12:97-141 '62.

PECHINOV, Dim

Floating deposits and chemically dissolved substances in the water-
collecting region of the Vucha River. Khidro i meteorolog no.6:26-33
'60. (EEAI 10:6)

(Bulgaria--Water)

PECHINOV, Dimitur, inzh.

Silting of small reservoirs. Khidrotekh i melior 7 no.8:231-235
'62.

PECHISHCHEV, M.

It is time to put words into action. Pozh.delo 6 no.12:26 D '60.
(MIRA 13:12)

1. Nachal'nik otдела Upravleniya pozharney okhrany Primorskogo
kraispolkoma, Vladivostok.
(Fire departments--Equipment and supplies)

SHABAROV, V.V.; PECHISHCHEV, M.I.

Effect of wire resistance on the sensitivity of a bridge circuit
and its calibration. Izv.tekh. no.3:18-20 Mr '63.

{MIRA 16:4)

(Bridge circuits)

NABOYKIN, Yu.V.; OGURTSOVA, L.A.; PECHIY, K.T.

Characteristics of the emission spectra of organic molecules under
strong excitation. Opt. i spektr. 16 no.3:545-547 Mr '64.
(MIRA 17:4)

ACCESSION NR: AP4020977

8/0051/64/016/003/0545/0547

AUTHOR: Naboykin, Yu. V.; Ogurtsova, L. A.; Pechiy, K. T.

TITLE: Peculiarities of the luminescence spectra of organic molecules under intense stimulation

SOURCE: Optika i spektroskopiya, v. 16, no. 3, 1964, 545-547

TOPIC TAGS: luminescence, luminescence reabsorption, pulse excitation, flash excitation, corone, benzophenone, Michler ketone, methacrylate, triplet-triplet transitions, organic molecule luminescence

ABSTRACT: The present investigation was undertaken in view of the current interest in the spectral characteristics of substances in the range of high stimulating light intensities when the population of the higher levels of the optical centers becomes high. Under such conditions, which are obtainable through use of intense flashtube illumination, triplet-triplet transitions may occur. However, there is only one paper in the literature reporting observation of triplet-triplet emission (H. von Schuler and G. Arnold, Zs. Naturforsch., 16a, 1091, 1961), and this pertains to naphthalene vapor. Accordingly, the present work makes an investigation into a luminescence reabsorption associated with triplet transitions (triplet-triplet

Cord 1/2

ACCESSION NR: AP4020977

absorption) in benzophenone, coronene, Michler ketone, and some other organic molecules dissolved in polymethacrylate and cooled to -120°C in a special cryostat. The luminescence spectra were excited by the light flashes from a powerful IFK-2000 (infrared) flash tube with a UFS-2 (UV) filter and photographed by means of an ISP-51 spectrograph with 1) frontal excitation (to eliminate reabsorption) and 2) side excitation (condition favorable for reabsorption). The absorption spectra were recorded by means of an ISP-28 spectrograph with a simplified pulse photometer. The traces of the different spectra of the above-mentioned three compounds in methacrylate are reproduced. In each case there is some evidence of reabsorption. The experimental data indicate that under certain conditions triplet-triplet absorption in organic molecule systems may result in significant alteration of the luminescence spectra due to reabsorption, a fact that should be borne in mind in investigating luminescence spectra of organic systems. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 18Jul63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: FH

NR REF SOV: 001

OTHER: 002

Card 2/2

PECHIYARE

YUGOSLAVIA/Nuclear Physics - Installations and Instruments.
Methods of Measurement and Research.

C-2

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8511

Author : Pechiyare

Inst :

Title : Cyclotron and Phasotron

Orig Pub : Bilten Drusht. matem. i fiz. Nar. Rep. Makedoniya, 1955,
6, 69-87.

Abstract : No abstract.

Card 1/1

GRIGOR'YEVA, N.Ye.; PECHKA, A.A.

Monoanilines of glutaconic aldehyde. Part 1: Derivatives of
primary aromatic amines. Zhur. ob.khim. 28 no.6:1677-1681 Je
'58. (MIRA 11:8)

1.Khar'kovskiy gosudarstvennyy universitet.
(Amines) (Glutaconaniline)

AUTHORS: Grigor'yeva, N. Ye., Pechka, A. A.

SN/17-20-0-4/65

TITLE: Monoanils of Glutacondialdehyde (Monoanily glutaronovogo dial'cegidu) I. Derivatives of Primary Aromatic Amines (I. Derivativy pervichnykh aromaticheskikh aminov)

PERIODICAL: Zhurnal obshchey khimii, 1948, Vol. 28, Nr 6, pp. 1677 - 1681 (USSR)

ABSTRACT: Of the derivatives of primary amines only the dinitro-substituted ones were known (ref 1). One of the authors synthesized the corresponding anilinderivatives and other primary aromatic amines (Refs 4,5). However, the nature of these compounds was not investigated in detail as their yields were too small. In order to investigate similar compounds more closely the authors elaborated a method of synthesis of the derivatives of aniline and of other amines; in some cases they obtained considerable yields, and the authors could investigate their condensability in aromatic amines and compounds containing active methyl groups. The condensation of the monoanils with aromatic amines was carried out under different conditions: in acetic acid in the presence of hydrochloric acid, in acetic anhydride in the presence of hydrogen chloride and in pyridine in the presence of hydrogen

Card 1/3

Monoanils of Glutacondialdehyde. 1. Derivatives of $\Delta V/1,2-6-54/63$
Primary Aromatic Amines

chloride. Only in the last mentioned case a color change occurred, which could be taken as an indication as to the nature of the process of reaction, however, no definite result could be achieved. The investigations carried out of the monoanils of glutaconaldehyde showed in any way that they are of aromatic character. Their condensability with compounds having active methyl groups can serve as indirect proof of the structure of the obtained monoanils. Thus the monoanils of glutaconaldehyde are investigated as derivatives of aromatic amines. It was shown that the unsubstituted monoanil and the monoanils of glutaconaldehyde with nucleophilic substituents in the aromatic nuclei do not enter the condensation with aromatic amines. The condensation of some monoanils with the methoxide of 2-methylbenzthiazole was carried out, however, the structure of the initial products could not be determined. There are 2 tables and 7 references, 3 of which are Soviet.

Card 2/3

Monoanis of Butacondialdehyde. 1. Derivatives of S.V. -21-1-1/1
Primary Aromatic Amines

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: May 12, 1957

1. Aniline derivatives--synthesis

Card 3/3

AUTHORS: Grigor'yeva, N. Ye., Pechka, A. A. SOV/79-28-6-54/63

TITLE: Monoanils of Glutaconedialdehyde (Monoanily glutakonovogo dial'degida) I. Derivatives of Primary Aromatic Amines (I. Proizvodnyye pervichnykh aromaticheskikh aminov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1677 - 1681 (USSR)

ABSTRACT: Of the derivatives of primary amines only the dinitro-substituted ones were known (Ref 1). One of the authors synthesized the corresponding anilinederivatives and other primary aromatic amines (Refs 4,5). However, the nature of these compounds was not investigated in detail as their yields were too small. In order to investigate similar compounds more closely the authors elaborated a method of synthesis of the derivatives of aniline and of other amines; in some cases they obtained considerable yields, and the authors could investigate their condensability with aromatic amines and compounds containing active methyl groups. The condensation of the monoanils with aromatic amines was carried out under different conditions: in acetic acid in the presence of hydrochloric acid, in acetic anhydride in the presence of hydrogen chloride and in pyridine in the presence of hydrogen

Card 1/3

Monoanils of Glutaconedialdehyde. I. Derivatives of SOV/79-28-6-54/63
Primary Aromatic Amines

chloride. Only in the last mentioned case a color change occurred, which could be taken as an indication as to the nature of the process of reaction, however, no definite result could be achieved. The investigations carried out of the monoanils of glutacone aldehyde showed in any way that they are of amphoteric character. Their condensability with compounds having active methyl groups can serve as indirect proof of the structure of the obtained monoanils. Thus the monoanils of glutacone aldehyde are investigated as derivatives of aromatic amines. It was shown that the unsubstituted monoanil and the monoanils of glutacone aldehyde with nucleophilic substituents in the aromatic nuclei do not enter the condensation with aromatic amines. The condensation of some monoanils with the methiodide of 2-methylbenzthiazole was carried out, however, the structure of the initial products could not be determined. There are 2 tables and 9 references, 3 of which are Soviet.

Card 2/3

Monoanils of Glutaconedialdehyde. I. Derivatives of SOV/79-28-6-54/63
Primary Aromatic Amines

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State
University)

SUBMITTED: May 12, 1957

1. Aniline derivatives--Synthesis

Card 3/3

MYSKOVA, N.M.; TOMA, O.F.; PECHKIN, K.P.; KHALEVSKAYA, S.I.;
GOL'SKAYA, I.F.; NEPOROZHNIY, P.S., red.; NOVITSKIY, L.M.,
nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG, T.M., tekhn.
red.

[Album of new construction equipment; recommended for use]
Al'bom novoi stroitel'noi tekhniki, rekomenduemoi k vnedre-
niyu. Moskva, Gosstroizdat. No.2. [Construction of power
engineering structures. Electrical engineering structures]
Energeticheskoe stroitel'stvo. Elektrotekhnicheskie raboty.
1963. 111 p. (MIRA 16:10)

(Power engineering) (Hydraulic structures)

PECHKO, M.A., kand. tekhn. nauk; GUSHCHIN, Yu.P., inzh.; KHMEL'NIKER, V.L.,
inzh.

Experience in the operation of the equipment of a 300 Mw. block with
superhigh steam parameters. Elek. sta. 36 no.6:15-19 Je '65.
(MIRA 18:7)

PECHKO, M.A., kand.tekhn.nauk; KHMEL'NIKER, V.L., inzh.

Operation of the equipment of high-pressure blocks with 150 and 200 Mw.
ratings. Elek. sta. 3/4 no.11:27-32 N '63. (MIRA 17:2)

FECHKO, M.A., inzh.; DUBROVSKIY, Ye.M., inzh.; KAPCHITS, Z.F., inzh.

Low power PKM-1S water-tube boiler designed by the Central
Scientific Research Institute for Boilers and Turbines.
Energetik 9 no.1:28-31 Ja '61. (MIRA 16:7)

(Boilers)

PECHKO, Ye.Ya.

Director airs his opinions. Bum.prem. 35 no.12:17-18 D '60.
(MIRA 13:12)
(Paper industry)

PECHKO, Ye.Ya.

Decorative paper as an effective material for coating and
finishing various surfaces. Bun.prom. 37 no.3:19-20 Mr '62.
(MIRA 15:3)

1. Direktor Krasnogorodskoy bumazhnoy fabriki.
(Paper)

PECHKO, Ye.Ya.

Krasnogorod industrial and experimental paper combine. Bum.prom.
35 no.9:3-5 S '60. (MIRA 13:9)

1. Direktor Krasnogorodskoy bumazhnoy fabriki.
(Krasnogorod--Paper industry--Equipment and supplies)

PECHKORIYA, Y_o.

Month of fire prevention campaign in Georgia. Pozh. delo 3 no.7:4-5
Jl '57. (MIRA 10:6)

1. Nachal'nik Upravleniya pozharney okhrany Gruzinskoy SSR.
(Georgia--Fire prevention)

PECHKOVA, T.

Soft thermoplastic materials for the interior decoration of
the means of transportation. Tekh. est. no.4:19-21 Ap '65.
(MIRA 18:6)
1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekhnicheskoy
estetiki.

PECHKOVA, T., khudozhnik-tekhnolog

New types of textile runner rugs. Tekh. est. 2 no.8:17-19 Ag '65.
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekhnicheskoy
estetiki.

MOGLYAK, Vladislav Ivenovich; SHVETS', G.I. [Shvets', H.I.], kand. tekhn. nauk,
vidpovidal'nyy red.; PECHKOVS'KA, O.M. [Pechkova'ska, O.M.], red.
vidavnitstva; RAKHLINA, N.P., tekhn. red.

[Maximum discharge of snow waters by rivers of the Ukraine]
Maksymal'ni vytraty vid talykh vod na richkakh URSR. Kyiv, Vi-vo
Akad. nauk URSR, 1957. 162 p. (MIRA 11:2)
(Ukraine--Runoff)

20-119-6-33/56

AUTHORS: Dogadkin, B., Pechkovskaya, K., Gol'dman, E.

TITLE: On the Structure and the Reinforcing Action of Colloidal Silicic Acid as Filler of Synthetic Rubber (O strukture i usilivayushchem deystvii kolloidnoy kremnekisloty kak napolnitelya sinteticheskogo kauchuka)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 119, Nr 6, pp. 1170 - 1173 (USSR)

ABSTRACT: This work investigates the character of the distribution of the colloidal silicic acid as representative of a new glass of intensifiers in sodium-butadiene rubber. This test object also was chosen for the following reason: Of the same raw material and also by the same method, only varying of the conditions of the technological process, samples of colloidal silicic acid with essentially different reinforcing effect can be produced. From this the possibility of the comparison of active and inactive fillers results. For the performance of these experiments a series of samples of colloidal silicic acid with high, mean, and low

Card 1/3

On the Structure and the Reinforcing Action of
Colloidal Silicic Acid as Filler of Synthetic Rubber

20-119-6-33/56

reinforcing action in rubber sorts of sodium-butadiene rubber was produced. The chemical composition of these samples practically was equal and they also differed only very little with regard to the specific surface, pH, and various adsorption characteristics. But the rubber mixtures produced on the base of sodium-butadiene rubber, which contain the samples mentioned have an essentially different structure of the mixture and also essentially different physical-mechanical properties of the vulcanisates. The degree of the structuring of the filler in the mixture is characterized by the lixivation coefficient which is determined by the share of the filler, which passes over into the basic solution, in its total content in the mixture. A diagram illustrates the dependence of the lixivation coefficient on the rate of filling for samples of colloidal silicic acid of the highest or lowest reinforcement coefficient resp. (active resp. inactive samples). The most active silicic acid is leached out much easier than the inactive one. The higher the lixivation coefficient is for a given system the stronger marked are also the strength properties of the vulcanisate.

Card 2/3

On the Structure and the Reinforcing Action of
Colloidal Silicic Acid as Filler of Synthetic Rubber

20-119-6-33/56

The activity of the colloidal silicic acid can be decreased considerably by heating at 600°C. There are 4 figures, 3 tables, and 7 references, 3 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti
(Scientific Research Institute of Tire Industry)

PRESENTED: December 25, 1957, by P. A. Rebinder, Member, Academy of
Sciences, USSR

SUBMITTED: December 12, 1957

Card 3/3

30

Structure and properties of filled rubber mixtures. III.
 Mixtures of sodium-butadiene rubber with channel black.
 B. Dogailkin, K. Pechkovskaya, and M. Dashvskii.
Kolloid. Zhur. 10, 357-68 (1948). — The elec. resistivity R of
 mixts. of butadiene rubber (I) with C black (II) (av.
 particle size 35 m μ , most frequent particle size 20 m μ) is
 decreased 10-fold by good mixing. When the wt. ratio
 (r) II:rubber increases from 0.2 to 0.4, R decreases from
 1.8×10^9 ohm-cm. to 1.8×10^8 , while further increase of
 r to 0.6 lowers R to 1.5×10^8 only. Ohm's law is valid
 in all mixts. Increase of r from 0.2 to 0.6 increases d
 from 1.070 to 1.242 and lowers the swelling in EtOH +
 PhMe. Presumably at $r < 0.2$, II particles do not touch
 each other; between $r = 0.2$ and 0.4 they form chains,
 and above $r = 0.4$ they gradually fill the space between
 the chains. Stearic acid (5% of I) slightly increases R
 and slightly decreases the swelling ability of I + II.
 Nonvulcanized mixts. of I 100, II 60, stearic acid 2.5,
 Rutwax 5, mercaptobenzothiazole 1.8, ZnO 5, and S 1.5
 parts, have R of 1.5×10^9 . Vulcanization at 143°
 reduces R to 4.4×10^8 . Vulcanized rubbers of the above
 compo., except for II, have residual elongation, power loss,
 and heat formation at 40° deformation increasing with r ,
 while elasticity and plasticity are smaller the greater r is.
 The total relative elongation has a max. at $r = 0.2$.
 Tear resistance, abrasion resistance, and tensile strength
 have a max. at $r = 0.4$, i.e. when the II chains are fully
 formed.
 J. J. Bikerman

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM STRIPING	INDEXED	FILED	ONLY	DATE	BY	REMARKS
100000 02	1	2	3	4	5	6

DOGAJIN, B.; PECHKOVSKAYA, E.; GOL'DMAN, E.

Structure and the reinforcing effect of colloidal silica as a filler
for synthetic rubber. Dokl. AN SSSR 119 no.6:1170-1173 Ap '58.
(MIRA 11:6)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
Predstavleno akademikom P.A. Rebinderom.
(Silica) (Rubber, Synthetic)

PECHKOVSKAYA ; R.

✓ 4122. Structure and properties of mixes of
codium-butadiene rubber with 'Ukhtinskaya' channel
black. B. A. DOGARIN, R. PECHKOVSKAYA, and
V. KUPRIYANOV. "Isledovaniya po Fizike i
Khimii Kauchuka i Rezin", 1950, p. 103-10. This
paper is closely similar in content, figures and con-
clusions to that by B. A. Dogarin et al. "Struc-
ture and properties of filled rubber mixes. III"
(this journal, 1950, 28, 16). 382D21.5421C6.11

PECHKOVSKAYA, K.

✓ 422. Structure and properties of mixes of sodium-butadiene rubber with furnace and lamp blacks. B. A. DZHAPEIX, K. PECHKOVSKAYA, B. SIMONOVSKAYA, and V. KUMARPENOV. *Izv. Akad. Nauk SSSR Khim. Fiz. Khim. Khim. i Rezhim*, 1950, p. 120-23. In contrast with channel black mixes, carbon black chain structures do not occur in two-component mixes with furnace or lamp black. Addition of these blacks to a toluene solution of rubber gives insignificant structural viscosity even with high concentrations of black. In the solid mix and in solution the chain structures occur through the addition of stearic acid in contents of about 50 ml black to 100 g of raw rubber, they are shown by electro-conductivity in solid mixes and structural viscosity in the solutions. In all cases in unvulcanized mixes the specific electrical resistivity depends upon the voltage, which indicates direct contact between the parts of the black structure. A continuous black structure is formed in mixes with not less than 50 ml of furnace or 60 ml of lamp black only after vulcanization. The physico-mechanical properties of the vulcanizates change as the filling rises, according to a curve with a maximum (tensile strength) or a monotonic curve (modulus, hardness, plasticity). The maximum of tensile strength occurs with about the same amount of filler as the formation of a continuous black structure.

Pechkovskaya, K.

4129. Electron-microscopic study of sodium butadiene and smoked sheet mixes with channel black. B. A. DEMIDOV, K. PECHKOVSKAYA, S. POPEO, and N. RIMANOVSKAYA. *Industriya i Khimii Krasnaya i Belaya*, 1970, p. 141-42. Electron replica micrographs show that in mixes of sodium-butadiene rubber or of smoked sheet with less than 25 ml channel black to 100 g rubber, the distribution of different sizes of particle or aggregates of carbon black is non-uniform. As the black content increases the distribution becomes more uniform; these mixes are characterized by discrete distributions of the aggregates and by short chains. As the amount of filler rises the number and length of chains grow. Mixes with 25 to 40 ml black and above are characterized by a chain structure formed of the primary black particles and aggregates. In vulcanized sodium-butadiene mixes the size of the aggregates, whether discrete or linked in chains is increased in comparison with the aggregates in the unvulcanized mix. It was not possible to determine the distribution of black in vulcanized mixes of plasticized smoked sheet, as the presence of black in the mix was not evident in the electron micrograph. There are 9 references.

382D21.542106-11

53

C. A. PECHKOVSKAYA, K.

Structure and properties of loaded rubber mixtures. IV.
An electron-microscope study of various carbon blacks and
their mixtures with sodium butadiene rubber. K. Pechkovskaya, S. Pupko, and B. Dzagadkin (Sci. Research
Inst. Tire Ind., Moscow). *Kolloid Zh.* 12, 367 (1950);
cf. C.A. 43, 8188; 44, 9182. *Papers Sci. Res. Inst.*

Tire Ind. 1950, No. 2. C black suspensions in H₂O,
1-10%, or toluene were dispersed by ultrasonic vibrations
and observed in an electron microscope. Sections of loaded
rubber were coated with collodion, which in turn was coated
with Cr, or with Me methacrylate, which in turn was coated
with SiO₂. Channel C blacks (D) form chains whose parti-
cles range from 250 to 400 Å; Ener I samples prove to be
better as fillers. In mixts. of I and rubber, I is not well dis-
persed, but the dispersion is improved by adding stearic
acid, mercaptoethanol, etc. Other carbon blacks consist
of particles of 500-900 Å, and form chains when mixed with
rubber. Thermal C blacks are very polydisperse in I, I₁
and do not agglomerate in rubber. I. I. Lukerman

USSR/Chemistry, Colloid - Rubber, Jul/Aug 52
Carbon Black

"Structure and Properties of Rubber Compositions
Containing Fillers. IX. Modifications of Carbon
Black Structures as a Result of Multiple Deforma-
tions," K. Pechkovskaya, Ts. Mil'man, B. Dogadkin,
Sci Res Inst of the Tire Ind

"Kolloid Zhur" Vol XIV, No 4, pp 250-259

By measuring the elec resistance of various types
of rubber (natural and synthetic) contg channel
black, furnace black (Kosmos-40), burner black, or
"thermic" black, detd the effect of mech stressing

225T12

of rubber on the carbon black structure. Estab-
lished relationships between the data found and
the properties of carbon black particles as detd
from electron-microscopic, thermodynamic, chem,
and other data.

225T12

PECHKOVSKAYA, K.

BECHTOLD, K.

B. T. R.
Vol. 3 No. 4
Apr. 1954
Rubber and Elastomers

5727* Structure and Properties of Leaded Rubber Mix
tures. IX. Modification of Carbon Structures by Repeated
Deformations. X. Alteration of Carbon Black Structures
by Heat Treatment. K. Tschikowsky, T. Schilling, and B. A.
Dagidkin. *Rubber Chemistry and Technology*, v. 28, Oct.-Dec
1953, p. 810-831. (Translated from *Kolloidnyi Zhurnal*, v. 14
no. 4, 1952, p. 230-239.)

MF
11-5-51

L 21268-65 EWT(m)/EPF(c)/EWP(j) PC-4/Pr-4 RM

ACCESSION NR: AP4011310

S/0069/64/028/001/0072/0075

AUTHOR: Mazina, G. R.; Pechkovskaya, K. A.; Chernaya, V. V.

26
18 B

TITLE: Electron microscopic investigation of latex gel structures

SOURCE: Kolloidnyy zhurnal, v. 26, no. 1, 1964, 72-75

TOPIC TAGS: latex gel, latex film, structure, syneresis, drying, vulcanization, electron microscope, polychloroprene latex, tensile strength, stretch, shrinkage

ABSTRACT: Electron microscopic investigation of gels and films obtained by ionic deposition of polychloroprene latex showed that they have a continuous globular structure which is retained throughout all stages of the technological process: syneresis, drying and vulcanization. Partial coalescence takes place during syneresis and drying, increasing the mean size of the globules and causing the system to become more homogeneous. This results in an increase in the tensile strength and relative stretch. Vulcanization does not cause breakdown of the globular structure, but the average size of the globules decreases, apparently due to

Card 1/2

L 27268-65

ACCESSION NR: AP4011310

shrinkage. The electron microscope findings are in agreement with the physical-chemical results which show a change in structure corresponding to changes in physical properties. Orig. art. has: 3 figures and 1 table

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute of the Tire Industry); Nauchno-issledovatel'skiy institut rezinovy*kh i lateksny*kh izdeliy, Moscow (Research Institute for Rubber and Latex Products)

SUBMITTED: 26Jul62

ENCL: 00

SUB CODE: MT

NO REF SOV: 004

OTHER: 004

Card 2/2

Pechkovskaya, K.A.

181. Changes in carbon black structures in vulcanized rubbers under the influence of repeated deformation and heating. B. A. Droganskaya and K. A. Pechkovskaya. 'Sovetskoe i Utomlenno', 1959, p. 53-57. In rubbers containing active blacks there are formed structures whose development and change with fatigue may be followed from the specific d.c. electrical resistivity, ρ . With carbon-carbon bonds the strength of the current I is expressed by: $I = eV$, where V is the voltage and e a constant; in other cases $I = eV^n$, where $n > 1$. The change of ρ with temperature is expressed as ρ/ρ_0

$\rho/\rho_0 = \exp(\alpha \Delta T)$, where $\alpha > 0$ if raising T leads to destruction of the carbon black structure, and < 0 in the opposite case. The authors investigated ρ , n , α and $n\alpha/n_0$, where n_0 is the factor for the rubber in its original state. The approximation of n to 1 after the effect of stress or temperature shows that the carbon-carbon bonds are stronger than the carbon-rubber bonds. With repeated deformation and heating, the weaker bonds are gradually destroyed, and in the remaining structure the proportion of stronger bonds increases. With active carbon blacks the C-C bonds are stronger than the C-rubber bonds, with furnace blacks the two types of bond are of approximately equal strength, while with the semi-active blacks the C-C bonds are the weaker. The conference discussion is reported. This paper incorporates much experimental data and conclusions which have appeared previously (cf. Rubb. Abs., 1963, abs. 255 and 2638). 421C8-R

LFH

PECHENOVSKAYA, K. A., and DOGAJKIN, B. A.

"Structure of Carbon Rubbers and Its Change under the Influence of Deformation and Heating" (Struktura sazhevykh rezin i yeye izmeneniya pod vliyaniyem deformatsii i nagrevaniya) from the book Trudy of the Third All-Union Conference on Colloid Chemistry, pp 371-379, Iz. AN SSSR, Moscow, 1956

(Report given at above Conference, Minsk, 21-4 Dec 53)

PECHIKOVSKAYA, K. A.

5189. Structures of resin filled with carbon black
and changes in them resulting from deformation and
heating. B. A. DOGANOV and K. A. PECHIKOV.
Trudy Vsesoyuznogo Nauchno-Issledovatskogo
Centra po Polimeram i Khimii (Nauka, Moscow).
Noul. SSSR, 1966, 37(1), Transl. Cont. Lists Russ.
Period., 1967, No. 48, 143. 5842106

5-11
4E20
2 May

PM
1/15

where d is the optical density of the suspension. This index depends on three basic properties of the carbon black; it increases with increasing specific surface area of the black and decreases as the degree of structuration increases, and also with increasing contamination of the surface. A method is worked out for determining this index, comprising the dispersion of carbon black in water by means of ultrasonic oscillations from a magnetostrictive vibrator. The resulting dispersions will stand dilution to concentrations permitting the sufficiently accurate determination of the optical density. The tensile strength of vulcanizates containing carbon black increases with the increase in the colorimetric index of these carbon blacks. The considerable scatter which is observed is explained by the influence of many other factors upon the mechanical strength of the vulcanizates, and also in some cases by the known non-uniformity of certain carbon blacks. The colorimetric index is recommended as a value which, in conjunction with others, gives a more exact and objective picture of the quality. There are 6 references.

4217445

POLOVINA, A. I.; POLOVINA, I. I.; POLOVINA, I. I.; POLOVINA, I. I.

Effect of the structure and nature of the carbonaceous surface
on its dispersion in synthetic emulsions. Izv. Akad. Nauk SSSR
no. 7:33-35, 1965.

1. Naučno-issledovatel'skiy institut khimiy prirodoispol'zovaniya.

PAVLOVA, I.P.; SINYAYEVA, O.A.; PECHKOVSKAYA, K.A.

Methodology for determining the dispersion degree of carbon
black in raw compounds and vulcanizates. Kauch. i rez. 24
no.2:47-49 F '65. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

PECHKOVSKAYA, K.A.; PAVLOVA, I.P.; BRODSKIY, G.I.; DMITRUKHA, V.S.

Effect of carbon black on the wear resistance of vulcanizates.
Kauch. i rez. 22 no.10:28-32 0 '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

FECHKOVS KAYA, K.A.; PAVLOVA, I.P.; SINTAYEVA, O.A.; DASHEVSKIY, M.I.

Use of electron microscopy for evaluating the distribution of
carbon black in rubber compounds. Zav.lab. 29 no.8:968-970
'63. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber) (Carbon black) (Electron microscopy)

L 18129-63

EWP(j)/EWT(m)/BDS

AFFTC/ASD

Pc-4

RM/MAY

ACCESSION NR: AP3004571

S/0032/63/029/008/0968/0970

AUTHORS: Pechkovskaya, K. A.; Pavlova, I. P.; Sinyayeva, O. A.; Dashevskiy, M. I.

TITLE: Use of electron microscopy for evaluation of carbon black distribution in rubber mixtures

SOURCE: Zavodskaya laboratoriya, v. 29, no. 8, 1963, 968-970

TOPIC TAGS: electron microscopy, carbon black distribution, rubber mixture, tear surface, cast, aggregate

ABSTRACT: Carbon black samples were prepared from the same batch, deaggregated on a vibrator, hydrated, or treated with graphite, and then incorporated into rubber. Investigation by an electron microscope was conducted on ultra-thin slices of the rubber as well as on casts made from torn surfaces of vulcanized rubber discs. The cast method was preferred, since in making slices it was necessary to encase a small band of the sample rubber in methylmetacrylate with benzoyl peroxide as polymerization initiator, followed by incubation at 49C. This resulted in a distortion of the original structure of the sample. It was found that an increase in the surface activity of channel carbon black by

Card 1/2

L 18129-63

ACCESSION NR: AP3004571

hydration results in an increase in the average size of the carbon black aggregates, while pre-treatment with graphite has the opposite effect, due to a lowering of its surface activity. Orig. art. has: 2 pictures and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti
(Scientific Research Institute of the Rubber Industry)

SUBMITTED: 00

DATE ACQ: 26Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 001

OTHER: 000

Card 2/2

S/081/61/000/023/054/001
B106/B101

AUTHORS: Pechkovskaya, K. A., Livshits, F. B., Orlovskiy, P. N.,
Novikova, I. S.

TITLE: Comparative study of the physicochemical and technical
properties of test samples of disperse furnace blacks of the
HAF type

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 560, abstract
23P347. (Tr. N.-i. in-ta shin. prom-sti, sb. 5, 1960, 68-80)

TEXT: The results of a comparative study of the properties of test
samples of disperse furnace blacks (DB) of the HAF type from liquid raw
material and import fillblack O are presented. The increased adsorptive
surface of the DB blacks and their higher oxygen content can retard the
vulcanization process and sometimes diminish strength of vulcanizates.
As to dispersity, the DB blacks, produced under semi-industrial conditions
from liquid raw material, are not inferior to the best blacks of type HAF.
The most important physicochemical and chemical properties of the DB
blacks are given along with the electrical conductivity, internal friction.

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S/081/61/000/023/055/061
B106/B101

AUTHORS: Pechkovskaya, K. A., Gol'dman, E. I., Shedid-Khuzemi, N. A.,
Orlovskiy, P. N., Kupriyanova, V. L., Simanovskaya, S. A.

TITLE: Methods for determining the specific surface area of semi-reinforcing and reinforcing blacks for the technical control of black production

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 560, abstract 23P348. (Tr. N.-i. in-ta shin. prom-sti, sb. 5, 1960, 81-94)

TEXT: A description is given of three methods for determining the specific surface area of semireinforcing and reinforcing blacks. The specific adsorption surface is obtained by the method of adsorption of I_2 , the geometrical specific surface by the calorimetric method, and the method of Deryagin provides a specific surface close to the adsorption specific surface. All of the three methods furnish conditional values for the specific surface, are simple, and can be used for the first technical control of the dispersity of blacks in industrial laboratories. [Abstracter's note: Complete translation.]
Card 1/1

PECHKOVSKAYA, K.A.; ORLOVSKIY, P.N.; GOL'DMAN, E.I.

Classification of carbon blacks for rubber manufacture. Kauch.
i rez. 20 no. 4:47-48 Ap '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Carbon black) (Rubber)

S/138/61/000/004/005/006
A051/A129

AUTHORS: Pechkovskaya, K.A., Orlovskiy, P.N., Gol'dman, E.I.

TITLE: The classification of carbon blacks for the production of rubber

PERIODICAL: Kauchuk i rezina, no. 4, 1961, 47-48

TEXT: Prior to the Second World War two types of carbon black were manufactured in the Soviet Union: channel gaseous and lamp carbon black. By 1956 six different types were produced, viz. furnace, jet burner, thermal and anthracene carbon black. In connection with the forthcoming revision of the ГОСТ - GOST 7885-56, the introduction of a new, stricter classification of the carbon blacks is being considered. In the recommended classification the name of the carbon blacks takes into account the use of the raw material. A number is added to the letter designation if more than one type of carbon black is produced by one method from the same raw material. The first letter designates the method of the carbon black production K - (K), for channel, П (P) for furnace, and Т (T) for thermal. The second letter is associated with the type of the raw material. ✓
Card 1/4

15.9110

25887

S/069/61/023/004/002/003

B101/B215

AUTHORS: Pechkovskaya, K. A., Senatorskaya, L. G., Berman, B. Z.,
Dogadkin, B. A.

TITLE: Reinforcement of rubber in latex. 7. Electron microscopic
examination of filled latex mixtures

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 4, 1961, 462-463

TEXT: This report was made at the tret'ye Vsesoyuznoye soveshchaniye po elektronnoy mikroskopii (Third All-Union Conference on Electron Microscopy), Leningrad, October 1960. The second communication of this series was published in Trudy II konferentsii po lateksu, Leningrad 1958. The authors based their report on a paper by B. A. Dogadkin et al. (Kolloidn. zh. 18, no. 5, 528, 1956) which shows that a reinforcing action of carbon black in latex can be attained by adding a destabilizing substance (casein) to latex. Here, this effect was studied under an 3M-100 (EM-100) electron microscope having a magnifying power of approximately 20,000. Collodion, quartz, or carbon replicas of the latex film, frozen in liquid nitrogen, were prepared. It was found that 1) all latex films containing neither

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B101/B215

Reinforcement of...

carbon black nor casein had globular structures. 2) Addition of casein changed the structure. Part of the globuli disappeared, and a granular structure formed. Casein removes the protective covering of the globuli, thus allowing the latter to form a continuous polymer phase and to interact with carbon black. The contact area between polymer and carbon black is increased and, thus, causes reinforcement. 3) If the non-vulcanized, filled film was rolled, the last globuli disappeared. 4) Carbon black also had a destabilizing effect upon latex, although to a smaller extent than casein. Films with carbon black without casein contained less but larger globuli. 5) The number of globuli was reduced in the presence of carbon black and casein. [Abstracter's note: The electron microscopic pictures are irreproducible.] There are 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti, Moskva (Scientific Research Institute of the Tire Industry, Moscow)

SUBMITTED: November 21, 1960

Card 2/2

SOV/138-59-3-4/16

AUTHORS: Blagov, S.S. (Deceased); Pechkovskaya, E.A.; Lykin, A.S.,
Simanovskaya, S.A. and Shmigel'skiy, V.K.

TITLE: Electron-Microscopic Investigations of Rubber Mixtures
and Their Basic Components (Elektronno-mikroskopich-
eskoye issledovaniye rezinovykh smesey i ikh osnovnykh
komponentov)

PERIODICAL: Kauchuk i rezina, 1959, Nr 3, pp 12 - 18 (U.S.R.)

ABSTRACT: Most interesting results of electron-microscopic invest-
igations were obtained when analysing natural and synthetic
rubbers (Refs 3 to 8). It was possible to determine the
sol and gel fractions of natural rubber, the sulphur-
structure which is characteristic for rubbers and the
relation between the dimensions of spherical components
and the molecular weight of the rubber, as well as the
characteristics of the secondary structure of crystallising
rubbers. During the present investigations the authors

Card 1/3 used a modified electron microscope EM-100 with a 0.25 mm

SOV/138-59-3-4/16

Electron-Microscopic Investigations of Rubber Mixtures and Their Basic Components

diaphragm (0.05 mm diaphragm aperture) which made it possible to increase the resolving power of the microscope from 100 to 30 Å. Details of the preparation of samples from rubber solutions as well as from hard rubbers are given and electron-microscopic tests were carried out on them. Figure 1 shows photographs of a natural rubber film sample; Figure 2 a colloidal replica with an unplasticised butadiene-styrene rubber surface; Figure 3 a quartz replica of an unfilled natural rubber vulcanisate; Figure 4 a quartz replica of unfilled vulcanisate prepared from natural and sodium-butadiene rubber. In all cases the degree of magnification is quoted. Further tests were carried out on various types of activated carbon black. A generator with a special vibrator (15 cycles/second) was used for dispersing the carbon black in alcohol or in toluene (Figure 5). Figures 6 to 9 show micro-photographs of four activated carbon blacks, and a table gives characteristics of their degree of dispersion. Formulae for calculating the average

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SOV/138-59-5-4/16

Electron-Microscopic Investigations of Rubber Mixtures and Their Basic Components

diameters are given. Special channel black is used in the manufacture of various types of ink. It is characterised by a high degree of dispersion, and a lesser degree of coarseness than normal channel black. Anthracene black resembles furnace black to a greater degree than channel black. This is confirmed by comparative tests on rubbers containing the two types of carbon black; rubbers containing anthracene black as fillers showed a higher rate of vulcanisation and higher moduli. There are 9 figures, 1 table and 17 references, of which 5 are English, 4 German and 8 Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute for the Tyre Industry)

Card 3/3

AUTHORS: Lykiz, A. S., Pechkovskaya, K. A.

001/40-23-6-14/28

TITLE: Electron-microscopic Investigations of Vulcanized Products of Natural and Synthetic Rubber (Elektronnomikroskopicheskoye issledovaniye vulkanizatorov natural'nogo i sinteticheskikh kau-chukov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 6, pp 725 - 728 (USSR)

ABSTRACT: In the introduction a number of papers (Refs 1-7) are listed, in which the structure of rubber products vulcanized by means of electron microscopes were investigated by means of the replica method. Two further papers (Refs 8,9) are mentioned, in which the thermodynamical compstibility of rubber was investigated, which showed the importance of cohesion energy. It was also found that in mixtures of two different kinds of rubber, their properties do not behave additively. In the present paper the authors describe the carrying out of electron-microscopic work with vulcanized products which have one or two types of rubber as a basis. In the first part of this paper the investigations of pure natural rubber and of three synthetic rubbers are dealt with. For this purpose, the method of quartz-replica

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